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10/561,559	12/19/2005	Jae-Hyuk Oh	60,469-241; OT-5178 LAB	9936
7590 Theodore W Olds Carlson Gaskey & Olds Suite 350 400 W Maple Road Birmingham, MI 48009			EXAMINER KRUER, STEFAN	
			ART UNIT 3654	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/561,559  
Filing Date: December 19, 2005  
Appellant(s): OH ET AL.

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David J. Gaskey  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 5 March 2009 appealing from the Office action mailed 19 August 2008.

**(1) Real Party in interest**

A statement identifying the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,305,502	He et al	12 - 2002
JP-07215634*	Kurosawa et al	8 - 2003

\* ***Certified*** English Translation Attached

**(9) Grounds of Rejection**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1 – 3, 6 – 8 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over He et al (6,305,502) in view of Kurosawa et al (JP-07215634).

**Claims 1 and 8**, He et al disclose their elevator system (Fig. 1) comprising:

- car (202, Fig. 8); and
- two spaced car follower portions (118) each having an electromagnet (216), and said car follower portions each being provided with guide structure (42) for moving along a guide rail (25) in an elevator hoistway, said electromagnets on said car and said car follower portions interacting to force said elevator car to be centered between said car follower portions;

however, He et al disclose their car as having a plurality of opposed reaction plates (210), wherein their electromagnet (216) of their car follower portions face a corresponding one of their reaction plates to provide an attractive force in lieu of a repulsive force.

Attention is directed to Kurosawa et al who teach their plurality of opposed electromagnets (10, Fig. 3) of their car (1) and their car portions (12) interacting to provide a repulsive force as an alternative (Claim 4, attached machine translation as well), more responsive means to the system of He et al for reducing vibrations.

It would have been obvious to one of ordinary skill in the art to modify the reference of He et al with the teaching of Kurosawa et al for enhanced performance.

**Claim 2**, He et al disclose their car follower portions are interconnected (116) to move together as a single car follower.

**Claim 3**, He et al disclose their car is free to move relative to said car follower in a horizontal plane but constrained to move with said car follower in a vertical direction.

**Claim 6**, He et al disclose a plurality of electromagnets associated with each of their car follower portions.

**Claims 7 and 11**, He et al disclose wherein a control system (140, Fig. 4) controls the field strength of said electromagnets to in turn control an attractive force.

Attention is directed to Kurosawa et al who teach a control system (8, 22) that controls the field strength of their electromagnets to in turn control a repulsive force for their electromagnets, wherein their repulsive force affords responsiveness.

It would have been obvious to one of ordinary skill in the art to modify the reference of He et al with the teaching of Kurosawa et al for enhanced performance.

#### **(10) Response to Argument**

Appellant's arguments are solely directed to the prosecution of **Claims 1 and 8** for which applicant argues that the common rejection of said claims is improper due to:

- the secondary reference teaches solely an attractive force;
- "... even if the secondary reference did teach a repulsive force, that cannot be inserted into the primary reference because that would change the principle of operation of the primary reference and cause it to work in an opposite manner as intended... and renders it incapable of achieving its intended result";
- "...neither reference teaches opposing electromagnets interacting with each other"; and,
- a lack of prima facie case of obviousness in making the combination.

With respect to appellant's assertion that the secondary reference fails to teach a repulsive force, as referenced in the rejection above, the secondary reference teaches the applicability of either an attractive force or a repulsive force in Claim 4, as supported by Paragraph 0017 of the machine translation submitted with the office action mailed 30 April 2008 and Figure 3.

Appellant has reviewed the disclosure and referenced an excerpt therefrom (Para. 0013) with respect to *one* of the embodiments (Fig. 1), in which attractive force is indeed utilized; however, as referenced above and supported in the body of the specification, the secondary reference, upon reviewing another embodiment (Fig. 3), teaches the applicability of using either attractive or repulsive force (“...power of absorption ...” or “... [power of] restitution is used”), for feature of vibration damping as disclosed by the primary reference and the instant invention as well.

Additionally, in contradiction to appellant's assertion that “... neither reference teaches opposing electromagnets interacting with each other”, appellant's attention is directed again to said another embodiment of the secondary reference as depicted and reviewed, in which the electromagnets (10 and 12) are opposed by electromagnets (10 and 12, respectively), thereby supporting the referenced Claim 4 of the rejection. The action of said paired electromagnets is similar to that of the primary reference for the latter's feature of “... bi-directional (push/pull) motion” (Col. 3, L. 16 – 25 and 42).

(It should be stated the electromagnets of the primary reference act unidirectionally and face in opposing directions for purpose of electromagnetically interacting with their respective “reaction plate” to attract said plate and thereby counteract the other paired electromagnet and reaction plate. Therefore, the electromagnets, though utilizing attractive force, are “paired” for opposing action.

Furthermore, it was noted that Appellant's arguments filed immediately prior to the Office action mailed 19 August 2008, did not refute or take issue with the understood teaching of the referenced claim, but rather argued that though the embodiment of the secondary reference utilizes repulsive force, there was no motivation in making the combination in that the functions of the primary reference and secondary references were “so distinct” and said primary reference already afforded vibration control whereas the secondary reference is simply directed to maintaining a longitudinal gap (“floating”, in accordance with a feature of appellant's disclosure) and not to centering a car.)

With respect to appellant's argument that "... even if the secondary reference did teach a repulsive force, that cannot be inserted into the primary reference because that would change the principle of operation of the primary reference and cause it to work in an opposite manner as intended... [rendering] it incapable of achieving its intended result", the Examiner respectfully disagrees.

The principal operation of the primary reference, again, is the use of "unidirectional", paired electromagnets and their respective reaction plates wherein attractive forces between a paired electromagnet and reaction plate counteracts (works in tandem with) the other of a paired electromagnet and reaction plate to provide a desired "... bi-directional (push/pull) motion". This desired motion is affected by controlling the unique electromagnetic fields (strength) of the counteracting electromagnets to afford a desired centering of an elevator car along two axes (111, 127, Fig. 5; Col. 5, L. 9 - 34)

Again, the secondary reference teaches the use of attractive force between an electromagnet and an associated plate (10 & 6 and 12 & 9, Fig. 1) as well as, in the alternative, paired, opposing electromagnets (10 – 10 and 12 – 12, Fig. 3) wherein repulsive forces can be generated to maintain a desired gap ( $\delta 2$  &  $\delta 3$ , respectively) intermediate of said paired, opposing electromagnets for vibration control. Therefore, that the primary reference utilizes attractive forces of counteracting, unidirectional electromagnets to achieve a desired centering of an elevator car and the secondary reference teaches the ability of utilizing either attractive or repulsive electromagnetic forces, the secondary reference would not destroy the intended operation or intended result of the primary reference.

In summation, a prima facie case of obviousness is proper and the disclosures and, more critically, the respective teaching(s) are substantially supported.

With respect to **Claims 2 - 3, 6 – 7 & 11**, applicant has not traversed the rejections.

Art Unit: 3654

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Stefan Kruer/

Examiner, Art Unit 3654

28 May 2009

/John Q. Nguyen/

Supervisory Patent Examiner, Art Unit 3654

Conferees: John Nguyen /JN/

Darnell Jayne /dj/